

# PATENT ABSTRACTS OF JAPAN

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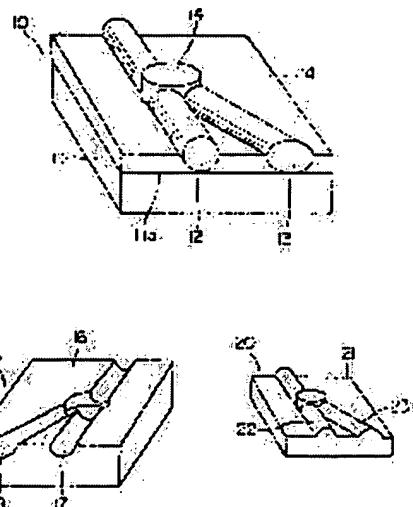
## (54) MANUFACTURE OF ADAPTOR FOR OPTICAL FIBER

### (57)Abstract:

PURPOSE: To obtain a highly accurate guide groove, by preparing a master mold of adaptors and forming a desired guide groove by using the mold by utilizing a shrinking phenomenon resulting from the gelation in the course of a sol-gel method.

CONSTITUTION: A master mold 10 is constituted of rods 12 and 13 placed on a base plate 11 and a molding agent 14 for fixing the rods 12 and 13. Namely, the main-path rod 12 and branched-path rod 13 are connected with each other in Y-shaped form shown in figure and Both 12 and 13 are molded to their half positions with the molding agent 14. Thereafter, the connected section is formed to, for example, semi-circular shape with the molding agent 14. Thus the master mold 10 is formed.

After a sol which is a mixed solution of, for example, tetramethoxy silane, water, and methyl alcohol is brought into contact with the master mold 10 and a gel is formed from the sol by using a sol-gel method, the master mold is taken out and the gel is dried by heating, and thus, an adaptor is formed. When the gel is dried by heating, the gel is shrunk. But a transfer pattern 15 in which the shrinkage is previously calculated is obtained. Furthermore, another transfer pattern 20 which is shrunk by using a mixed solution similar to the above-mentioned



solution is obtained based on the transfer pattern 15.

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